Using **butane cylinders** safely

This leaflet is for the safe use of Calor butane cylinders with a click-on or screw-on valve. If you have any queries please contact your local Calor retailer.

Calor supplies Liquefied Petroleum Gas (LPG) which is obtained during the process of refining crude oil supplies or direct from oil wells. There are two types of LPG – Butane and Propane. Many appliances are designed to be used with either, but it is important to use the correct pressure reducing device (regulator) as the operating pressure for the two types of gas are different.

For identification **BUTANE** is supplied in **YELLOW** or **BLUE** cylinders, and propane in **RED**, **GREEN** or **GREY** (Patio Gas) cylinders.

The cylinders are specially made to store the fuel in its liquid state under moderate pressure. The liquid turns to gas vapour, which fills the space above the liquid. As gas is drawn off in use more liquid turns to gas to replace it. A regulator fitted in the supply line to the appliance(s) keeps the gas pressure constant as the cylinder empties – until there is no liquid left to turn to gas.

✓ **DO** check that the Calor seal is unbroken before purchasing.*

✓ **DO** treat a cylinder with care to ensure the valve is not damaged. A damaged valve could result in a leak with serious consequences.

✓ **DO** use a cylinder upright. When horizontal, liquid gas could get into the supply pipes with serious results.

✗ **DON'T** store cylinders where they would obstruct means of access, passageways, stairwells or emergency exits.

✗ DON'T attempt to disconnect a regulator if the flame does not go out when the pressure regulator switch or cylinder valve is turned off (applicable to appliances isolated directly by the pressure regulator switch or cylinder valve). Leave the appliance alight and call your Gas retailer.

✗ **DON'T** subject a cylinder to heat because pressure inside the cylinder could build up to a point beyond the designed safety limit.

✗ **DON'T** store or use cylinders in cellars, below ground level or near drains or gullies, because butane and propane are heavier than air. If there is a leak the gas could collect at a low level and become dangerous in the presence of a flame or a spark.

✗ **DON'T** use propane cylinders indoors residentially, because propane is contained under higher pressure and should only be kept outside. Butane can be used indoors in cabinet heaters, or when connected to cookers installed to the national standard by a qualified installer.**

✗ **DON'T** use cylinders in high rise flats.

✗ **DON'T** use any cylinder for any purpose other than that for which they are intended.

✗ **DON'T** pour water over the regulator.

* Only refers to cylinders with Calor safety seals.
**Qualified gas installers in NI are Gas Safe and in ROI are RGI registered

THE REGULATOR

A regulator will be included in the connection between the cylinder(s) and the appliance(s). Different butane cylinders may have different valves and it is essential that the regulator cylinder connection is compatible with the cylinder valve.

- Regulators should be made to either BS3016 or EN12864 for low pressure non-adjustable types, EN13785 for up to 4 bar outlet or EN13786 for automatic changeovers.
- The regulator is precisely set to control the pressure of the supply and **must not be adjusted**.
- Some industrial appliances operate at high pressure and are designed to operate at varying pressures depending on the heat output required. For these a special high pressure regulator must be used which incorporates a means of manual adjustment.
- If the regulator shows signs of wear it should be replaced.
- It is important for the regulator that rain and moisture are prevented from entering the device.
- Calor recommend the use of regulators incorporating an excess flow device.
- Generally manufacturers recommend a 10 year lifespan for regulating devices.

FLEXIBLE HOSES

- All flexible hoses or tubing should be secured as follows: for 8mm internal diameter or greater operating at 50mbar or less then crimp clips (Figure 1), swaged fittings or worm drive clips (Figure 2) can be used. Worm drive clips should not be used for hose or tubing less than 8mm internal diameter and hose operating at greater than 50mbar.
- The hose diameter must be compatible with the hose connections nozzles.
- Make sure that the hoses are kept clear of "hot spots".
- All flexible hoses should be replaced after 5 years of service or if showing signs of wear or damage. Inspect them frequently.
- Make sure that where hose end sealing washers are used they are in good condition.
- Hose length should be as short as practicable and shall not extend from one room to another, nor pass through any walls, partitions, ceilings or floors.

Use only hose approved for use with LPG e.g. to BS3212 or EN1763. For cabinet heaters the hose should be to BS3212 Type 2 or EN1763 equivalent. This standard of hose is also used for high pressure connections including connecting propane cylinders to wall mounted regulators. BS3212/1 hose can be used for low pressure connections to portable appliances. Quick connection hoses to BS669 Part 1 (warranted for use with LPG by the manufacturer) are used for domestic cooker connections.

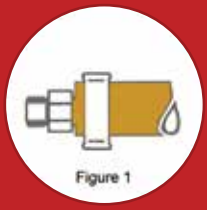
Figure 1


Figure 2

APPLIANCES

Please read the instructions and labels provided with your appliance and keep them handy for future reference.

Ensure your appliance is designed to burn butane and not for example natural gas. The appliance must comply with appropriate European, British and Irish Standards. New appliances must have CE approval.

Appliances must be installed according to the manufacturer's instructions. Only qualified competent people should work on appliances or gas installations.**

All burning processes require oxygen, so there must be an adequate supply of fresh air for your appliance. Ventilators or grilles should never be blocked. Please observe the manufacturer's requirements for ventilation.

All gas appliances must be correctly maintained and regularly serviced to the manufacturer's instructions by a competent gas installer.**

Cabinet heaters or any other flueless appliances should not be used in bedrooms, garages or hairdressing salons.

Where practicable, change cylinders outdoors. Cylinders should be changed in a well ventilated area. When changing cylinders indoors opening a window will increase ventilation. No source of ignition e.g. naked flames, pilot lights, cigarettes, electrical appliances etc. should be nearby.

The cylinder valve, mating connections and sealing washers must be clean and undamaged before making the connection.

After connecting a cylinder a check should always be made that there are no leaks of gas from the cylinder connection. Leaks may be detected by brushing connections and joints with a leak detection fluid. Bubbles will immediately form at the leak. Leaks may also be detected by sound or smell.

BUTANE CYLINDERS

Single cylinder installation 4.5kg size (handwheel valve).

This cylinder takes a regulator or flow controller which screws on to the valve outlet. Both have a connecting nut which incorporates a black sealing washer.

CONNECTING A CYLINDER

1. Ensure all gas taps are OFF.
2. Check that the valve handwheel is OFF by turning clockwise.
3. Remove protective cap and keep to replace later.
4. Inspect the black sealing washer for damage before connecting. Replace the washer if faulty.
5. Fit the connecting nut (left hand thread) to the cylinder using an appropriate spanner. Tighten firmly, but do not overtighten as this can damage the washer.
6. When gas is required, turn the valve handwheel anticlockwise.

DISCONNECTING A CYLINDER

1. Ensure all gas taps are turned OFF.
2. Turn the valve handwheel OFF (clockwise rotation).
3. NEVER DISCONNECT THE REGULATOR (OR CONNECTING NUT) WITH THE CYLINDER VALVE OPEN.
4. DISCONNECT the regulator (left hand thread) with an appropriate spanner.
5. Screw protective cap back on the cylinder valve outlet.

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If in Doubt, Contact your Calor Retailer

BUTANE CYLINDERS

Yellow cylinder with "click-on" valve

CONNECTING THE REGULATOR (TYPE 1 e.g. Kosan 584)

1. Remove the plastic cap from the cylinder valve by turning it anti-clockwise and lifting it up.
2. Check the black sealing ring is not cracked or damaged.
3. Check the rubber hose is correctly fastened to the regulator and user appliance.
4. Check regulator lever is in OFF position. Hold the regulator in both hands, press the base up into the regulator with the finger tips and place the regulator firmly over cylinder valve.
5. Press the base of the regulator downward until a click is heard. The regulator is now in position ensuring a gas-tight connection.
6. Turn the lever on top of the regulator over to the ON position, indicated by red flame symbol facing upwards. Gas supply is now ready for use.

DISCONNECTING THE REGULATOR

1. Ensure all gas taps are turned OFF.
2. Turn the lever to the OFF position (red flame symbol downwards).
3. Clasp the regulator in both hands and press the black base up into the regulator which can then be removed from the cylinder valve.
4. Replace the plastic cap by turning it clockwise. This will protect the cylinder valve.

CONNECTING THE REGULATOR (TYPE 2 e.g. Kosan 682)

1. Remove the plastic cap from the cylinder valve by turning it anti clockwise and lifting it up
2. Check the black sealing ring is not cracked or damaged
3. Check all the taps of the user appliance are closed.
4. Check the rubber hose is correctly fastened to the regulator and user appliances.
5. Make sure the handle is in the "closed" position, (this happens when on the handle is a visible red rectangle with the marking "OFF") (Figure1).
6. Remove the plastic protective plug from the automatic valve.
7. Pull the ring upwards (Figure 2) and fit the regulator (e.g. Kosan 682) onto the valve. Afterwards give the ring a strong push downwards (Figure 3). A 'click' should be heard, meaning the regulator has been correctly fitted.

8. To turn ON, turn the handle anti clockwise 180 degrees. In this position a red flame and ON is visible

DISCONNECTING THE REGULATOR

1. Ensure all gas taps are turned OFF
2. Close the gas flows by turning the handle 180 degrees clockwise. A red rectangle with the marking 'OFF' will be visible
3. Remove the regulator by pulling the ring upwards as in Figure 2. (This can only be done if the handle is in the OFF position)
4. Replace the plastic cap by turning it clockwise. This will protect the cylinder valve.

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EMERGENCIES

As LPG is odourless, Calor add a special additive to give the gas a distinctive smell and so help the detection of leaks.

NEVER LOOK FOR A LEAK WITH A NAKED FLAME!

In the event of GAS LEAKAGE or SUSPECTED LEAKAGE:

- Extinguish all naked flames and ignition sources.
- Turn off all gas appliances.
- Do not switch on or off any electrical equipment.
- Open doors and windows to increase ventilation.
- Turn off gas supply at cylinder.
- **NOTIFY** Calor Gas on the numbers on the last page.

  Do not use any gas appliance until it has been made safe.

In the event of FIRE:

- Immediately raise the alarm.
- **DO NOT** go near any cylinder in the vicinity of the fire.
- Call the Fire Brigade immediately and inform them that LPG cylinder(s) are on the premises.
- Turn off the gas supply if practicable to do so.

CALOR

Calor contact

For Information, advice and support on all Calor products and services, contact our Customer Support Team.

ROI: 1850 812 450
NI: 028 9045 5588

In the event of an emergency outside office hours, please dial:

ROI: 01 291 6229
NI: 0845 075 5588

Email:
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